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Address: Dr. Yu. A. Isakov, Institute of Geography of the Academy of Sciences of the USSR, Moscow.

## 50 Years of Ornithology in North-west Africa 1930-1980

by J. D. R. Vernon

Northwest Africa, consisting basically of the Maghreb countries of Algeria, Morocco and Tunisia, is an important wintering area for many Palaearctic species. Within its boundaries it includes substantial areas of the Central and Western Sahara, including most of Rio de Oro and Mauritania, which the bulk of West Palaearctic migrants traverse to winter in the tropics.

Before 1930, much of the area was relatively unexplored. Though a good deal was known about the distribution of birds in Tunisia (Whitaker 1905, Bannerman 1927) and to some extent of those in Algeria (Malherbe 1855, Loche 1858, and others), virtually nothing was known of the Western Sahara and little about Morocco except for the coastal Atlantic fringe (Irby 1875, Hartert 1901, 1926, Jourdain 1921, Lynes 1925, Meade-Waldo 1903, 1905), since access inland was difficult, at least by Europeans, until important contributions to the ornithology of the Algerian and Tunisian Sahara were made by Heim de Balsac (1924).

In the 1930's, Heim de Balsac published a series of papers on winter expeditions to southern Algeria and Morocco, including the discovery by Pivain of Dunn's Lark *Eremalanda dumni* in the Western Sahara. Later (1936) he published an important biography on the birds of the Maghreb and the Sahara, establishing for the first time that the Maghreb consisted of a Mediterranean Palaearctic fauna adjacent to a Saharan Ethiopian fauna and defining the ecological factors responsible for restricting the northern boundary of the desert to the 200 mm isohyet. Other important contributions were by Bouet (1938) on the migration routes of White Stork *Ciconia ciconia* in the Maghreb and an expedition to the Hoggar by Meinertzhagen (1934). For Morocco important studies included papers on the birds of Azilal (Lynes 1933), on the High Atlas (Chaworth-Musters 1939) and a paper by Meinertzhagen (1940) on a journey in southwest Morocco and the Middle Atlas describing a number of new races of birds.

In the 1940's, two expeditions by Heim de Balsac (1942, 1948) to study both the fauna and spring migration in southwest Morocco and the Western Sahara, found a less arid zone of desert, a 200 km wide belt of vegetation parallel to the Atlantic coast which produced a unique southern projection of the range of some Palaearctic species including Sardinian Warbler *Sylvia melanocephala* and Magpie *Pica pica*. The expeditions also included exploration of the Jbel Toubkal, High Atlas, and of the Rharb wetlands, where they rediscovered the Crested Coot *Fulica cristata* and African Marsh Owl *Asio belveola*. Some important observations were also made in Algeria and Tunisia by Payn (1948) and in the Western Sahara (Dekeyser & Villiers 1950), adding the Scaly Warbler *Spiloptila clamens* to the Palaearctic list.

In the early 1950's in Tunisia an important discovery was the nesting of the Greater Flamingo *Phoenicopterus ruber* on the Chott el Djerid (Domergue 1950). In 1955, Blanchet's *Liste Oiseaux de Tunisie* was published and supplemented by a brief check list by Gouttenoire (1955). The systematic ringing of migrants at Cap Bon was started by ornithologists of the Société des Sciences Naturelles de Tunisie (Deleuil 1954). There were important studies by Castan (1955 a, b) on observations and ringing of migrant birds at Gabès in southern Tunisia in the spring.

In Morocco, the first regular reports on birds ringed and recovered were published by the Institute Scientifique Chérifien, Rabat (Panouse & Cortin 1951). Snow (1952) published an important contribution to the study of woodland birds in the northern Maghreb. Bannerman & Priestly (1952), Bannerman & Bannerman (1953) and Bierman (1957, 1959) undertook journeys by car over wide areas of Morocco, forerunners of similar journeys undertaken by many European ornithologists in the 1960's and 1970's. More important was the publication by Valverde (1959) of an ecological study of the Western Sahara (Rio de Oro). Brosset in the 1950's published a series of papers (mainly in *Alauda*) on his observations in northeast Morocco culminating in a special publication (1962) *Ecologie des Oiseaux du Maroc Oriental*. He showed that the desert fauna reached as far north as Berguent some 100km from the Mediterranean coast, confirming de Balsac's observations that the boundary of the desert in the north followed the 200 mm isohyet. For the first time ever, a nest of the Crimson-winged Finch *Rhodopechys sanguinea* was found, in the Middle Atlas by Olier (1959). R. de Naurois (1959) traversed the Western Sahara and reached the Banc d'Arguin, Mauritania, discovering there the first nesting for Africa of the Royal Tern *Sterna maxima*.

The 1960's saw the publication of Heim de Balsac & Mayaud's book *Les Oiseaux de Nord-Ouest Afrique* (1962), closely followed by *Les Oiseaux du Nord de l'Afrique* by Etchécopar & Hüe (1964), later translated into an English version by Hollom (1967). Mention must also be made here of the review by Moreau (1961) on problems of Mediterranean-Sahara migration patterns. K. D. Smith published two important papers (1965, 1968). The first mainly covered winter distribution and autumn migration in Morocco; the second, covering the spring migration, included the results of expeditions to Defilia in southeast Morocco, and to Beni-Abbès in northwest Algeria to study migration across the Sahara, and provided evidence of broad front migration across the whole of Morocco as well as proof of a substantial trans-Saharan passage of some species of terns and waders. Brosset & Olier (1966) found

an important colony of Audouin's Gull *Larus audouinii* on the Chafferine Islands and Robin (1966, 1968) discovered the nesting of Greater Flamingo and Slender-billed Gull *Larus genei* at Lac Iriki in southwest Morocco. Important studies were made on Eleonora's Falcon *Falco eleonorae* on Mogador Is. (Vaughan 1961 a, b, Walter 1968) and White-rumped Swift *Apus caffer* was discovered in the High Atlas (Chapman 1969). Also in the 1960's in Tunisia, important contributions were made by Castan (1963), Lombard (1965), Jacoby (1968), Macklin (1969) and Jarry (1969). In Algeria, there were important contributions by Dupuy (1968, 1970) on the Algerian Sahara. Surveys were initiated in the 1960's on the wildfowl status of the Maghreb in winter by Blondel (1963) and Blondel & Blondel (1964), and later all important wetland sites were listed for the 'Project Mar' (Olney 1965). These were followed in the 1970's by a series of regular winter counts of wildfowl on wetlands by the International Wildfowl Research Bureau (IWRB).

The most important event in the 1970's was the discovery in Algeria by Ledant of a new species, the Kabylean Nuthatch *Sitta ledanti* (Burnier 1976, Vielliard 1976, 1978). Burnier (1977, 1979) also contributed some important records for Algeria from little known areas.

There were important expeditions to West Morocco in 1971 and 1972 to study coastal birds and wetlands, especially waders in late summer and autumn (Pienkowski 1972, 1975), followed by a series of publications by Pienkowski and his colleagues, showing the importance of the wetlands for Palaearctic waders on migration in autumn. The 1970's also saw further visits to the Banc d'Arguin with Pététin & Trotignon (1972) making the first census there of wintering waders. Further visits by Gandrille & Trotignon (1973), Duhautois *et al.* (1974), Knight & Dick (1975) and Trotignon (1976) showed how important the Banc d'Arguin was as a breeding area and as a wintering area for Palaearctic waders. Pineau & Giraud-Audine (1974, 1975, 1976) published important contributions to northwest Morocco on breeding, wintering and migration. Hirsch (1976, 1978), on behalf of the World Wildlife Fund (WWF), surveyed colonies of Bald Ibis *Geronticus eremita* in Morocco, and showed there was a marked and continuing decline in breeding numbers since the early 1940's. Other notable records in Morocco were of Fulvous Tree Duck *Dendrocygna bicolor* in 1976 (Heinze 1979, Vielliard 1978a, and others) and of the Cape Shoveler *Anas smithii* (Duff 1979), the second record and first record respectively for the Palaearctic of these Ethiopian species. Heinze's (1979) contribution included the first proof of nesting of the Chanting Goshawk *Melierax metabates* in Morocco. There was also an important contribution on *Passer* in north-west Africa by Summers-Smith & Vernon (1972).

The publication of Heinzel, Fitter & Parslow's (1972) guide on *The Birds of Britain, Europe with North Africa and the Middle East* following Etchécopar & Hüe's earlier book, together with the advent of cheap package tours, was a stimulus to many European ornithologists to visit the Maghreb, especially Tunisia and Morocco, leading to the publication of a *Check List and Field Guide to the Birds of Tunisia* (Thomsen & Jacobsen 1979). A group of ornithologists in Algeria are also collating information on the birds of that country (see Malher 1978) and a B.O.U. check list for Morocco is envisaged in the near future (Vernon *et al.* in prep).



With regard to bird protection in the Maghreb, regulations vary from country to country. The situation in Morocco is discussed by Deetjen (1970) and Mills (1975) and in Tunisia by Kacem (1976), but in practice laws are not always enforced. In Algeria there are proposals to establish a National Park in an important wetland area at El-Kala. Some reserves have been set up in Morocco, including the national parks of Toubkal, High Atlas, and Tazzeka, in the Rif. The World Wildlife Fund is hoping to establish reserves to include the most important colonies of Bald Ibis (Hirsch 1976). In Tunisia, a project to protect 5 wetland areas, some of international importance, has been drawn up in co-operation between the Tunisian authorities and the international conservation bodies (IWRB, IUCN and WWF). The Banc d'Arguin has recently been designated a National Park (Trotignon 1976).

In the future, it is important that a more general awareness of conservation becomes appreciated in Northwest Africa and this can only be achieved through education of both young and old alike. Drainage of wetlands is, as always, a future threat, but of equal importance is the conservation of the indigenous cedar, green oak and cork oak woodland and the areas of endemic Argan woodland in southwest Morocco, still rich in bird species including Chanting Goshawk, Tawny Eagle *Aquila rapax*, Black-winged Kite *Elanus caeruleus*, and Fulvous Babbler *Turdoides fulvus*, though much is being cleared for agriculture. The conservation of the Middle Atlas lakes in Morocco as nesting and wintering areas for wildfowl, including concentrations of Crested Coot, cannot be overestimated. The sub-desert areas around the oases of southern Algeria, Tunisia and along the river valleys of south Morocco, should also be conserved as they are especially rich in desert species and the oases themselves offer important feeding areas for nesting and migrant birds and for some wintering Palaearctic warblers.

To sum up, during the last 50 years our knowledge on the distribution and migration of birds in Northwest Africa has been considerably extended, but much still needs to be done. Most of our knowledge of the Western Sahara is still based on the spring expeditions by Heim de Balsac and Valverde 20-30 years ago and little is known for the autumn and winter periods. Few ornithologists have studied specific areas or species and many areas inland remain relatively unexplored.

In conclusion, this brief review would not have been possible without reference to Heim de Balsac & Mayaud's *Oiseaux de Nord-Ouest Afrique* and to Etchécopar & Hüe's *Birds of North Africa*. Of equal value was Heim de Balsac's paper (1959) 'Ornithologie Française en Afrique du Nord' which reviewed the situation in northwest Africa up to 1959. Whilst putting the final touch to this paper (December 1979), it was sad to learn of the death of Heim de Balsac who contributed so much to the ornithology of northwest Africa.

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Address: J. D. R. Vernon, 55 Wolfridge Ride, Alveston, Bristol BS12 2PR, England.

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## Fifty years of ornithology in West Africa

by Gérard J. Morel

The publication in 1930 of the *Systema Avium Ethiopicarum* by W. L. Sclater marked the end of basic preliminary exploration in Africa. Since then, knowledge has been advanced by various faunistic works, resulting in progress by leaps and bounds.

The *Handbook of the Birds of West Africa* by G. L. Bates (1930) was the first work available to the general public. The same year, D. A. Bannerman started the publication, occupying 21 years, of his 8 volumes of the *Birds of Tropical West Africa*. West African ornithologists thus had the immense privilege of this monumental work at their disposal prior to the appearance in 1953 of the abridged, easily transportable, version in 2 volumes.

In the last 50 years various works of local interest have appeared: *Faune du Centre Africain Français* by R. Malbrant (1936, 1952); *Aves del Sahara Español* by J. A. Valverde (1958); *The Birds of French Cameroon* by A. I. Good (1952-53). Then, of works dealing with the whole of the west: *Oiseaux de l'Afrique Tropicale* by G. Bouet (1955, 1961, not completed); *Les Oiseaux de l'Ouest Africain* by P. L. Dekeyser & J. H. Derivot (1966-68). In 1970 and 1973 C. W. Mackworth-Praed & C. H. B. Grant, with their 2 volumes devoted to West Africa, completed their masterly series the *African Handbook of Birds*, started in 1952 and covering the whole of sub-Saharan Africa. Finally, there appeared in 1977 the *Field Guide to the Birds of West Africa* by W. Serle, G. J. Morel & W. Hartwig. All these works owe their existence in the first place to ornithological explorers who awaited neither the opening of roads nor of railways, even less of air routes or the benefits of modern medicine, to embark on their activities. It is impossible to cite all their names. However, one may mention: G. Bouet (French Congo, Liberia, Cameroun); K. M. Guichard (Mauritania, French Sudan); H. Heim de Balsac (Mauritania); L. Blancou (Central Africa); W. Serle (Sierra Leone, Cameroun, Nigeria); P. L. Dekeyser (Senegal).

In this general account, the Congo merits a special place. It comprises an enormous area, faunistically varied and rich, and has been studied with